IN THE ABSTRACT:

Please amend the Abstract as follows:

A ~~simplified~~ logic circuit <u>having structure</u> for performing the AES Rijndael MixColumns transform exploits the ~~common~~ relationship between each ~~of the~~ successive ~~rows~~<u>row</u> of the transform matrix and its preceding row. ~~A logic circuit for performing m~~<u>M</u>ultiplication of an (m.times.n) matrix by a (1.times.n) or by a (m.times.1) matrix <u>is performed</u>, where m is a number of rows and n is a number of columns, and where each successive row, m, of n elements is a predetermined row permutation of a preceding row<u>,</u> ~~comprises~~<u>includes</u>: n multiplication circuits; n logic circuits; n registers for receiving logical output from the logic circuits; feedback logic for routing ~~the~~ contents of each register to a selected one of inputs of the logic circuits in accordance with a feedback plan that corresponds to the ~~common~~ relationship between successive matrix rows; and <u>a</u> control ~~means~~ <u>unit</u> for successively providing as input to each of the n multiplication circuits each element in the (1.times.n) or (m.times.1) matrix.